



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7  
 UNIQUE ID NUMBER: 8PW086  
 COMBUSTOR:  
 ENGINE TYPE: TF

BYPASS RATIO:  
 PRESSURE RATIO ( $\pi_{oo}$ ): 21.5  
 RATED THRUST ( $F_{oo}$ ) (kN): 202.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	65.1	147.9	60.7	12.5
AS % OF ORIGINAL LIMIT	332.1	125.3	73.1	71.7
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			91.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			113.6	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			129.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			159.1	

### DATA STATUS

x PRE-REGULATION  
 - CERTIFICATION  
 x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 x OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.083	0.10	0.00	37.90	11.9
CLIMB OUT	85	2.2	1.764	0.10	0.00	27.70	9.0
APPROACH	30	4.0	0.609	1.30	7.80	7.60	2.5
IDLE	7	26.0	0.210	36.50	84.10	3.10	0.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			794	12179	28691	11892	-
NUMBER OF ENGINES				10	10	10	10
NUMBER OF TESTS				10	10	10	10
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				60.0	141.8	58.8	11.9
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				12.2	22.3	6.9	5.5
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				37.7-69.3	100.6-170.6	46.6-66.1	1.7-21.4

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.9-101.7
TEMPERATURE (K)	276-300
ABS HUMIDITY (kg/kg)	0.003-0.0149

### FUEL

SPEC	DERD 2494
H/C	
AROM (%)	

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: NGTE, Pyestock, UK  
 TEST LOCATION: British Airways Engine Overhaul Ltd, Wales  
 TEST DATES: 01/03/1976-01/07/1977

### REMARKS

1. Tests performed on in-service engine(s), after overhaul.
2. SN (char) wrongly calculated originally [1PW020].
3. Corrected to 12.5 SN in version 15 and % of standard recalculated

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)